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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,880	02/19/2004	Hisashi Nagano	NITT.0192	2759

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EXAMINER

VANORE, DAVID A

ART UNIT	PAPER NUMBER
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2881

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary	Application No. 10/780,880	Applicant(s) NAGANO ET AL.	
	Examiner David A. Vanore	Art Unit 2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8, 9 and 12 is/are allowed.
- 6) ☒ Claim(s) 1-7, 10 and 11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/04</u> | 6) <input type="checkbox"/> Other: ____ |

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

2. Claim 1 is objected to because of the following informalities: The term "of" at the beginning of line 5 of claim 1 does not appear to be grammatically correct. The examiner has assumed the term is meant to be "or" for purposes of examination in the instant Office Action. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art disclosed in the specification at pages 1-4.

5. Regarding claims 1 and 11, the description of the related art discloses a prior art apparatus and method of chemical substance analysis where an extracted sample is heated and vaporized to ionize a gaseous sample where the ions then drift into an

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electric field to measure mobility. This correlates to claims 1 and 11, where an ion source and analysis region are required. It is further disclosed at page 3 of the specification that a mass spectrometer which performs high precision chemical analysis is utilized in this mass analysis method is employed. Since this mass spectrometer is disclosed as necessarily performing a high accuracy detection of a chemical substance under test to determine the presence of a substance of interest, said mass spectrometer apparently indicates at least the presence of a generated ion. Therefore, such an apparatus, has a data processing means configured to indicate the presence of a substance of interest as required in claims 1 and 11. Further, at page 2 of the specification, it is disclosed that this method and apparatus utilize a chlorine dopant to react with the sample to generate the ions. Chlorine is an organic acid or organic acid salt, and therefore fulfils the required limitation of claims 1 and 11.

6. Regarding claim 2, the additional limitations of claim 2 are alternative in nature. Since the disclosed prior art in the specification meets the requirement with regards to ion generation in claim 1, and this limitation is similarly present in claim 2, claim 2 is similarly rejected over the applicant's disclosure.

7. Regarding claims 3-4, the additional limitations of claims 3-4 are recited as being alternative to that which is recited in claim 1. Since the disclosed prior art satisfies the limitation regarding detection of a generated ion, claims 3-4 is similarly rejected over the applicant's disclosure.

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8. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art disclosed in the specification at pages 1-4 and further in view of Thomson et al. (USPN 6,111,250).

9. The prior art disclosed in the specification teaches the required limitations of claims 5-7, but fails to teach the use of a tandem mass analysis device. The prior art relies on a quadrupole mass spectrometer.

10. Thomson et al. discloses a tandem quadrupole mass spectrometer for accurate analysis of a chemical sample to indicate the presence of a target substance. Note Fig. 1 and Col. 1-2.

11. Thomson et al. modifies the disclosed prior art to perform the mass analysis of the admitted prior art via tandem mass spectrometry.

12. It would have been obvious to one having ordinary skill in the art at the time the invention was made to perform the mass analysis step of the prior art using a tandem mass spectrometer because tandem mass spectrometry allows for accurate measurements using small quantities of a sample, measurement of multiple substance types simultaneously, and performs analysis rapidly on the order of minutes. The most relevant of these advantages is the use of minute amount of sample, which in the application of explosive detection is relevant because there is limited sample available for analysis.

13. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Danylewych-May et al. (USPN 5,741,984) in view of Neudorfl et al. (USPN 5,859,362).

14. Danylewych-May et al. teaches an apparatus for detecting chemical substances comprising a wiping material (30) called a token which may be manually used to collect a sample (Col. 2), a heating unit (58), and a mass analysis unit (Item IMS in Fig. 4) which determines the presence of a target chemical.

15. Danylewych-May et al. fails to teach a wiping material having an organic acid or organic acid salt thereon.

16. Neudorfl et al. teaches at Col. 9-10 that a sample collection material having an organic acid (oxalic acid or citric acid) impregnated thereon.

17. Neudorfl et al. modifies the prior art of Danylewych-May et al. to produce a chemical analysis device having a sample collection material with organic acid thereon which is wiped on a surface to collect a sample and when heated in the apparatus of Danylewych-May et al. releases organic acid vapor and sample vapor wherein the two react with one another.

18. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the Neudorfl et al. sample collection material with an organic acid thereon with the chemical analysis apparatus of Danylewych-May et al. because the organic acid on the sample collection material, as disclosed at Col. 3 of Neudorfl et al., enhances the detection of cocaine by reacting organic acid with cocaine on the sample collection wipe. This provides a distinct advantage in the surveillance of baggage and shipping containers for dangerous chemical substances of interest, in the instant case cocaine.

Allowable Subject Matter

19. Claims 8-9 and 12 are allowed.
20. The following is an examiner's statement of reasons for allowance: The main reason for allowance is that the prior art does not teach or suggest a chemical analysis apparatus where a gas generator creates a gas containing an organic acid or organic acid salt and mixes this gas with a sample gas to create ions for analysis according to claims 8-9 and 12.
21. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A. Vanore whose telephone number is (571) 272-2483. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (571) 272-2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dav



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